

(PCT Article 36 and Rule 70)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/050277

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
 - ☐ international search (Rule 12.3 and 23.1(b))
 - ☐ publication of the international application (Rule 12.4)
 - ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
 - ☐ the international application as originally filed/furnished
 - ☒ the description:
 - pages 1-17 _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☒ the claims:
 - nos. _____ as originally filed/furnished
 - nos.* _____ as amended (together with any statement) under Article 19
 - nos.* 1-6 _____ received by this Authority on 19.04.2005 with letter of 19.04.2005
 - nos.* _____ received by this Authority on _____
 - ☒ the drawings:
 - sheets 1/4-4/4 _____ as originally filed/furnished
 - sheets* _____ received by this Authority on _____
 - sheets* _____ received by this Authority on _____
 - ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☐ the claims, nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

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|-------------------------------|--------|-------------|-----|
| Novelty (N) | Claims | <u>2-4</u> | YES |
| | Claims | <u>1, 6</u> | NO |
| Inventive step (IS) | Claims | <u></u> | YES |
| | Claims | <u>1-6</u> | NO |
| Industrial applicability (IA) | Claims | <u>1-6</u> | YES |
| | Claims | <u></u> | NO |

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

- D1: US-A-4 584 885 (CADWELL ROBERT M) 29 April 1986 (1986-04-29);
- D2: PATENT ABSTRACTS OF JAPAN vol. 2002, no. 06, 4 June 2002 (2002-06-04) & JP 2002 048813 A (DENSO CORP), 15 February 2002 (2002-02-15);
- D3: DE 195 20 049 A (HITACHI LTD; HITACHI AUTOMOTIVE ENG (JP)) 7 December 1995 (1995-12-07);
- D4: EP-A-O 883 240 (YOZAN INC) 9 December 1998 (1998-12-09);
- D5: US 2003/057967 A1 (LIEN WEE LIANG) 27 March 2003 (2003-03-27);
- D6: US-A-4 754 226 (KUO JAMEBOND ET AL) 28 June 1988 (1988-06-28);
- D7: US-A-5 258 664 (WHITE BERT) 2 November 1993 (1993-11-02);
- D8: LARRY K. BAXTER: "Capacitive sensors" 1997, IEEE PRESS, NEW YORK, XP002264874.

The amendments submitted with the letter of 19 April 2005

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cause the subject matter of the application to be extended beyond the content of the application as originally filed. As a result, said amendments are contrary to the provisions of PCT Article 34(2)(b). The amendment in question is the following:

The omission of the feature "of which" broadens the scope of protection because it is now no longer only one plate on each capacitor that must be mobile but a plate on any one of a plurality of capacitors.

1. Independent claims

The present application does not fulfil the requirements set forth in PCT Article 33(1) because the subject matter of claims 1 and 6 does not comply with the requirement of novelty defined in PCT Article 33(2).

1.2 Claim 1

Document D2 describes (the references between parentheses apply to said document) a capacitive sensor including a measuring capacitor having a first plate (2) and a second mobile plate (1) movable relative to an optimal starting position when a measurement voltage is exerted between said two plates during a measurement step. Said sensor further includes means for exerting, simultaneously with said measurement voltage, an actuation voltage capable of returning said two

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plates to said optimal starting position (see the abstract).

1.2 Claim 6

The same argument applies *mutatis mutandis* to the subject matter of corresponding independent claim 6, which is consequently not novel either.

2. Dependent claims

Dependent claims 2 to 5 do not contain any features which, in combination with the features of any one of the claims to which they refer, might define subject matter that fulfils the PCT requirements of novelty or inventive step.

The use of a switched capacitor circuit to evaluate signals from a capacitive sensor, as described in the claims, is well known to a person skilled in the art (see documents D3 to D7 and the corresponding passages cited in the search report). Claims 2 to 5 contain only slight structural modifications to these known circuits. Said modifications are routine practice to a person skilled in the art and the resulting advantages are easily foreseeable. As a result, the subject matter of said claims likewise does not involve an inventive step.